UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,822	03/16/2001	Mark O. Vogel	00-1219	8725

7590 09/01/2004

Monica Grewal
McDonnell Boehanen Hulbert & Berghoff
32nd Floor
300 S. Wacker Drive
Chicago, IL 60606

EXAMINER	
PRIETO, BEATRIZ	

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/809,822	VOGEL ET AL.	
	Examiner	Art Unit	
	Prieto B	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Application No. 09/809,822 filed 03/16/01, claims 1-21 have been examined.

Claim Objection

2. Claim 3-4 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this case, claims 3-4 and 17-19 use of the phrases, "such as" and/or "for example", these renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejection under 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5 and 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over KUTHYAR et. al. (Kuthyar hereafter) U.S. Patent No. 5,909,431 in view of Okanoue U.S. Patent No. 6,134,587

Regarding the method claim 1 and computer readable implementation claim 14, Kuthyar teaches features of the invention substantially as claimed, including

an audio source (100-1 of Fig. 3) generating packets ("frames") from a plurality of bits of audio stream ("blocks of data") (col 4/lines 6-16, 39-40, 57-56);

placing each frame (105) within a transport structure (108) (col 4/lines 57-65) for transmission over the network (2-1) (col 5/lines 5-8);

transferring the transport structure through protocol stacks (111-113) prior to delivering the

transport structure to the physical layer (114) for transmission via the network (2-1) (col 5/lines 4-8); although the primary reference teaches delivering the transport structure to the physical layer for transmission to the network, it does not teach adding an address to the transport structure prior to delivering to said physical layer;

Okanoue teaches adding an address to the transport structure prior to delivering the "transport structure" to the physical layer (col 7/lines 24-31, col 14/lines 5-13, col 5/lines 48-57, col 6/lines 50-57);

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestion of Kuthyar for supporting multicast transmission to utilize Okanoue teaching for implementing multicast transmission. One ordinary skilled in the art would be motivated by to implement a multicast communication scheme in which bandwidth is utilized effectively where data is multicast to a defined group by a single transmission as disclosed as prior art in the Okanoue reference.

Regarding claim 15, an audio source (1-1 of Fig. 1, col 1/lines 52-55, col 2/lines 43-49); a network distribution system, i.e. the transmission to various locations (col 1/lines 59-65); and an end device (2-1, col 2/lines 43-49).

Regarding claim 2, the network is a (LAN) (Kuthyar: Fig. 1, col 2/lines 16-21).

Regarding claim 3, wherein the transport structure is an Open Systems Interconnection (OSI) model layer 2 frame including a Medium Access Control (MAC) frame (Kuthyar: Figs. 2-4).

Regarding claim 4, the transport is an ("application structure") protocol layer, placed within one of an (OSI) layer 4 or 3 or 2 structure, one IP (Kuthyar: Figs. 2-4).

Regarding claim 5, wherein the frame includes a ("LAN audio") header followed by a block of data (Okanoue: Fig. 6).

Regarding claims 10, multicast address assignment according to network address LAN based (Okanoue: col 2/lines 59-67 and col 4/lines 35-50).

Regarding claims 11-16, the multicast address is a multicast MAC address of a LAN (Okanoue; col 5/lines 48-57); the multicast address is locally assigned (Okanoue; col 12/lines 4-36); the multicast address is globally unique (Okanoue: col 8/lines 55-58); and LAN (Okanoue: col 4/lines 35-50).

Regarding claims 17-21, the network distribution system is a wired system IEEE 802.3 or IEEE 802.5 (Kuthyar: col 3/lines 5-8); wherein the network distribution system is a wireless system as a wireless LAN i.e. IEEE 802.11 (Okanoue: col 2/lines 6-16); a speaker (Kuthyar: col 5/lines 50-67); wherein the end-device (1-1) is separate from the speaker (Kuthyar: col 5/lines 50-67).

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuthyar in view of Okanoue in further view of Higgins (US 5,953,350)

Regarding claims 6-8, although the Okanoue reference teaches wherein the generated frame contains a multicast packet transmittable via a single multicast transmission, it does not explicitly teaches enabling the carriage of multiple audio formats.

Higgins teaches enabling the carriage of audio within a ("single") multicast stream (col 15/lines 30-45), wherein the audio includes multiple formats (col 9/lines 15-19).

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestion of the primary reference for transmitting multicast frames of data including audio, one ordinary skilled in the art would be motivated to enable user using desktop interactive multimedia computer that to receive audio, from remote sources over isochronous data channels including the Internet, as taught by the incorporated teachings and furthermore supporting the encapsulating of audio data for transmission over the Internet in accordance with the primary reference teachings.

Regarding claim 7, wherein the LAN audio header includes information that is used by an end device to stream to extract a single audio media ("audio program") from a ("multi-program LAN") audio stream for rendering (Kuthyar: col 5/lines 9-16)

Regarding claim 8, wherein the header includes information that enables the carriage of multiple audio sources within a single multicast stream (Higgins; col 15/lines 30-45, col 9/lines 15-19, Okanoue: col 2/lines 46-57).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuthyar in view of Okanoue in further view of Kurose et. al. COMPUTER NETWORKING: A Top Down Approach featuring the Internet, 2000, pages

Regarding claim 9, however the prior art does not explicitly teach where the components of an audio header including an encoding type.

Kurose et. al. Discloses generating an audio frame at an (sending) audio application program including placing each audio frame within a transport structure for transport across the network, know as encapsulation (e.g. encapsulating in UDP) through a corresponding socket layer interface (page 1); specifically, disclosing generating an RTP audio frame from a plurality of data blocks ("chunks") at an audio application program having a particular encoding type, wherein each frame of audio data has an RTP audio header further comprising the type of audio encoding, a sequence number and a timestamp (page 2), suggesting that multiple audio application programs incorporate and RTP header (Fig. 6.4-3) including a payload type, sequence number, timestamp and source identifier generating independent RTP streams of packets for transmission of only one stream (page 2).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include the teachings of Kurose given the suggestion of supporting IP multicasting including an RTP based transmission over LAN networks. One would be motivated to include RTP in to the application layer enabling multiple different application to more easily interoperate with other networking application and my further support one-to-many and many-to-many multicast transmission over the network.

7. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by SHIMP U.S. Patent No. 4,237,486.

Regarding claim 15, Shimp teaches an audio source (17) (col 3/lines 34-43), a network distribution system (col 5/lines 60-col 6/line 11) and an end device (38) (col 6/lines 41-47).

Citation of Pertinent Art:

8. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. 6,522,342

Gagnon et. al. teach a multi-program data stream, wherein data transferred to a computer through a connection is typically in an Internet protocol (IP) format, which is well known to those skilled in the art. Accordingly, the UDP packet 630 is passed to the IP layer 610, which in a well known manner, prepends an IP header 632 onto the UDP packet 630, thereby creating an IP packet 634. The IP header 632, which is shown in FIG. 29 denotes, inter alia, the IP addresses of the data source and destination computers. Information that is broadcast to a number of users preferably uses a multicast IP address. Alternatively, information may be addressed to specific users via a standard IP address.

SMILE – A Multimedia Communication Framework for Distributed Collaboration, Johanson, M., Framkom Research Corporation, pages 1-12.

Johanson discloses the distribution of a single multicast RTP stream from multiple application program comprising audio wherein each RTP audio frame header comprises a sequence number, multiple source identifiers and payload types, the single stream can be played back to an audio device, wherein the amplitudes of different sources can be scaled independently

RFC 1112: Host Extensions for IP Multicasting, Deering, S., Aug. 1989

Deering discloses audio frames transmitted as a single stream, wherein the multicast address is unique and assigned locally, and consistent with the addressing scheme of the network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to the Central Fax Office:

(703) 872-9306, for Official communications and entry;

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Fourth Floor (Receptionist), further ensuring that a receipt is provided stamped "TC 2100".

B. Prieto
TC 2100
Patent Examiner
August 21, 2004